

REMARKS/ARGUMENTS

1. Claim Amendments

The Applicant has amended Claims 10 and 11. Applicant respectfully submits no new matter has been added. Accordingly, Claims 1-12 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2. Claim Rejections - 35 USC § 112

Examiner has rejected claims 10 and 11 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicant has amended claims 10 and 11 to overcome the rejection.

3. Claim Rejections – 35 U.S.C. § 101

Claims 10 and 11 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The Examiner stated:

Applicant's arguments filed April 23, 2009 have been fully considered, at least under 35 USC § 101, but they are still not persuasive. Although applicant amended the preamble of claims 10 and 11 to try to overcome the non-statutory matter, it still fails to meet the statutory condition. The new preamble cites "a computer program product embodied on a computer readable medium loaded into a memory and executed by a processor. In the Specification of the present application, the "computer readable medium" is expressly defined as including from another computer via a computer network. (emphasis added)" (page 5, lines 10-12 of the specification) wherein the code can be transmitted via a computer network (e.g., signals, carrier waves, transmissions, optical waves, transmission media) which clearly including intangible media such as signals, carrier waves, transmissions, optical waves, transmission media or other media incapable of being touched or perceived absent the tangible medium through which they are conveyed. Thus, the recited "computer readable medium" is not a "process," a "machine," a "manufacture" or a "composition of matter," as defined in 35 USC 101. Accordingly, Claims 10 and 11 fail to recite statutory subject matter under

35 USC 101. Therefore, claims 10 and 11 are signal per se and they are non-statutory.

Applicant traverses the rejection as the Examiner has improperly incorporated material from the Specification into the claims. "Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim, limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004); *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) ("Interpretation of descriptive statements in a patent's written description is a difficult task, as an inherent tension exists as to whether a statement is a clear lexicographic definition or a description of a preferred embodiment. The problem is to interpret claims 'in view of the specification' without unnecessarily importing limitations from the specification into the claims.").

First of all, the Examiner grossly distorts the express language of the Specification when the Examiner states:

In the Specification of the present application, the "computer readable medium" is expressly defined as including from another computer via a computer network. (emphasis added)" (page 5, lines 10-12 of the specification) wherein the code can be transmitted via a computer network (e.g., signals, carrier waves, transmissions, optical waves, transmission media) which clearly including intangible media such as signals, carrier waves, transmissions, optical waves, transmission media or other media incapable of being touched or perceived absent the tangible medium through which they are conveyed.

Nowhere in the cited provisions does the Applicant define a computer readable medium as including while it is being transmitted from one computer to another. Lines 7-14 of Page 5 from the Specification actually state (emphasis added):

It is noted that the features of the method described above and in the following may be implemented in software and carried out in a data processing system or other processing means caused by the execution of computer-executable instructions. The instructions may be program code means loaded in a memory, such as a RAM, from a storage medium or from another computer via a computer network. Alternatively, the described features may be implemented by hardwired circuitry instead of software or in combination with software.

Once the program is loaded into the memory, it is fixed in place. It is no longer a signal. The Applicant does not claim the intangible code as it is being transmitted. A computer readable medium is not a signal in any sense of the term. Applicant has not asserted that a computer readable medium is a signal and it is improper for the Examiner to assert as much. The Applicant would strongly request the Examiner discuss this matter with his SPE and contact the Applicant's agent if the Examiner persists in maintaining this rejection.

Further, the Examiner's contention that; "computer readable medium' is not a 'process,' a 'machine,' a 'manufacture' or a 'composition of matter,' as defined in 35 USC 101, flies in the face of established law and USPTO regulations.

4. Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 1-5, 7-12 under 35 U.S.C.103(a) as being unpatentable over Graveman (US 6,851,052 81), and further in view of Carman et al (US 6,845,449 81). Applicant traverses the rejection. The Examiner stated (emphasis added):

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, based on the above response, the combination of teaching between Graveman, Carma, and Shokrollahi is proper and efficient. Graveman,

Carma, and Shokrollah do not need to disclose anything over and above the invention as claimed in order to render it unpatentable or anticipate. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claimed limitations. For the above reasons, it is believed that the rejections should be sustained.

As previously argued, the intended use of the claimed invention results in a structural difference between the claimed invention and the prior art. and the prior art structure is not capable of performing the intended use.

Specifically, Carman teaches a method to detect and correct errors by using an authentication mechanism that uses a reversible inner function. In Carmen, the encrypted inner result, as well as the message and authentication tag is sent as seen in Figure 15 and Figure 17A of Carman. This implies that the length of the data sent is substantially longer than only the message and the tag, as the length of the encrypted inner result must be about the same as the message itself (otherwise function 1502 would not be reversible).

Now the steps of Carman and Graveman can only be combined either by (i) using Carman with Graveman or (ii) Graveman with Carman. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious (See *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). In *re Ratti*, the court reversed the rejection of a patent application holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352).

As an initial matter, the matrix arrangement of Graveman is not directed to error correcting codes and the method of Graveman cannot be used with an error correcting code as such a code does not have the properties Graveman requires so as to

construct a secure AMAC according to that method. The arrangement of using Carman in Graveman would be illogical and unworkable.

The only logical way to combine Carman and Graveman is to use Graveman in Carman by using Graveman instead of SHA-1 in 1506 (Fig 15). But then the input to Graveman would be the tag, the message and the intermediate result. This would destroy the property of Graveman of being an AMAC. This is because a one bit change in the message will cause about half of the bits of the intermediate result to change and hence 1/4 of the input bits to Graveman would change. This would then ruin the AMAC aspect of Graveman. Hence there would never be a suggestion for one skilled in the art to combine the two references as to do so would add complexity without any benefit.

Further using Graveman in Carman would rely heavily on the basic construct in Figure 15 of Carman. This would be inefficient as a MAC code, which is the sole purpose of the present invention. In Carman, the objective is to detect and correct errors and in doing so, many more bits must be sent than that only needed for MAC functions. Hence, one skilled in the art would never consider Carman as a MAC function itself. Further, as explained above, using Graveman in Carman destroys Graveman and therefore, one skilled in the art would never combine them.

KSR International Co. v. Teleflex Inc. (KSR) requires that an Examiner provide "some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness." (KSR Opinion at p. 14). An Examiner must "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does," (KSR Opinion at p. 15). And, the Examiner must make "explicit" this rationale of "the apparent reason to combine the known elements in the fashion claimed," including a detailed explanation of "the effects of demands known to the design community or present in the marketplace" and "the background knowledge possessed by a person having ordinary skill in the art." (KSR Opinion at p. 14). Anything less than such an explicit analysis is not be sufficient to support a *prima facie* case of obviousness. Based upon KSR, the Examiner has failed to show any sufficient reason for combining the references, and therefore the claims are not obvious in view of any combination of the cited references."

The Examiner rejected claims 5-6 under 35 U.S.C.103(a) as being unpatentable over Graveman (US 6,851,052 81),in view of Carman et al (US 6,845,449 81) and further in view of Shokrollahi (US 6,631,172). Applicant traverses the rejection. Claims 5-6 depend from claim 1 and recite further limitations in combination with the novel elements of claim 1. Therefore, the allowance of claims 5-6 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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